

REMARKS

Claims 1-14 are pending in the present application.

An Embodiment of the Present Invention

An embodiment of the present invention is directed to an exhaust gas purification apparatus for an engine that includes: a catalytic converter provided in an exhaust path of said engine and including a carrier, an HC absorbent carried on said carrier for absorbing HC in exhaust gas of said engine, an HC purifying catalyst carried on said carrier and capable of purifying HC desorbed from said HC absorbent, and a transition metal carried on said carrier for absorbing CO in the exhaust gas; and a control apparatus for controlling operation of said engine, said control apparatus including HC desorption timing estimation means for estimating a timing at which HC is desorbed from said HC absorbent and control means for controlling an air fuel ratio upon starting of said engine to a ratio richer than a stoichiometric air fuel ratio to start operation of said engine, changing over the air fuel ratio to a ratio leaner than the stoichiometric air fuel ratio at the timing at which the HC is desorbed based on an output of said HC desorption timing estimation means.

As stated in page 12, line 25 - page 13, line 1 of the specification, the air fuel ratio is maintained at the ratio leaner than the stoichiometric air fuel ratio for a period of time determined based on an actual temperature of the HC absorbent.

Claim Rejections - 35 U.S.C. § 102

Claims 1-4, 6, 7, and 11-14 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Abe et al. (USP 5,538,697). This rejection is respectfully traversed.

Abe discloses operating an engine under a fuel rich condition for no longer than 50 seconds after a cold start of an engine, and then feeding an oxidizing gas for 40-140 seconds (which may differ by the position of the absorbent-catalyst or the absorbent) (col. 11, lines 15-21).

Instead of feeding the oxidizing gas, Abe also discloses feeding a fuel in an amount smaller than a theoretical amount, such that the air-fuel ratio can be controlled to a lean side for a certain period of time (col. 11, lines 35-52).

In other words, in Abe, the air-fuel ratio is controlled to the lean side for a predetermined period of time which may be changed according to the position of the absorbent.

Abe, however, does not maintain "the air fuel ratio at the ratio leaner than the stoichiometric air fuel ratio for a period of time determined based on an actual temperature of the HC absorbent." Accordingly, Abe does not disclose or suggest the "control apparatus" as recited in claim 1.

Claims 2-4, 6, 7, and 11-14, variously dependent on claim 1, are allowable at least for their dependency on claim 1.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

Claim Rejections - 35 U.S.C. § 103

(a) Claims 5 and 9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Abe. This rejection is respectfully traversed.

Claims 5 and 9, variously dependent on claim 1, are allowable at least for their dependency on claim 1.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

(b) Claims 8 and 10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Abe in view of Yasui et al. (USP 6,681,567). This rejection is respectfully traversed.

Claims 8 and 10, variously dependent on claim 1, are allowable at least for their dependency on claim 1.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

Request for Initialed Form PTO-1449

In reviewing the application file, the undersigned has noted that the appropriate initialed Form PTO-1449 in response to the Information Disclosure Statement (IDS) filed on August 29, 2003 has not been received by Applicant. The Examiner is therefore requested

to return a copy of the initialed Form PTO-1449 to the undersigned as soon as possible.

Conclusion


Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and objections, and allowance of the pending claims are earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Maki Hatsumi (Reg. No. 40,417) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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